

Amendments to the Claims

Please cancel claims 1-14 as filed without prejudice. Please add new claims 15-34 as shown below in the List of Claims.

List of Claims

- 1-14. Cancelled.
15. (New) A method of assaying a hydantoin racemase, comprising:
 - a) reacting an enantioselective hydantoinase and said hydantoin racemase with a composition comprising chiral hydantoin molecules enriched in the enantiomeric form opposite to the selectivity of said hydantoinase, wherein said hydantoin racemase has a slower conversion rate than said enantioselective hydantoinase; and
 - b) determining the amount of resulting N-carbamoyl-amino acid or freed protons in a time-dependent manner.
16. (New) The method of claim 15, wherein said hydantoin molecules are aliphatically substituted.
17. (New) The method of claim 15, wherein said hydantoinase is from *Arthrobacter crystallopoietes*.
18. (New) The method of claim 15, wherein the ratio of the rate constants of the hydantoinase to the hydantoin racemase (k_{hyd}/k_{rac}) is greater than 2.
19. (New) A process for the preparation of a mutated hydantoin racemase, comprising:
 - a) subjecting a nucleic acid sequence coding for a first hydantoin racemase to mutagenesis;
 - b) producing a mutated hydantoin racemase by cloning the nucleic acid sequence obtained from step a) into a vector and then transferring the vector into an expression system, and

- c) assaying the mutated hydantoin racemase produced in the expression system of step b) for improved activity and/or selectivity and/or stability using the process of claim 15.
- 20. (New) The process of claim 19, further comprising isolating either the mutated hydantoin racemase which, relative to said first hydantoin racemase has improved activity and/or selectivity and/or stability, or isolating a nucleic acid encoding said mutated hydantoin.
- 21. (New) The process of claim 20, wherein the hydantoin molecules used in the method of claim 15 are aliphatically substituted.
- 22. (New) The process of claim 20, wherein said hydantoinase used in the method of claim 15 is from *Arthrobacter crystallopoietes*.
- 23. (New) The process of claim 20, wherein, in the method of claim 15, the ratio of the rate constants of the hydantoinase to the hydantoin racemase (k_{hyd}/k_{rac}) is greater than 2.
- 24. (New) A mutated hydantoin racemase or nucleic acid produced by the process of claim 20.
- 25. (New) A method of making enantiomerically enriched N-carbamoyl-amino acids or amino acids comprising reacting hydantoin molecules with a hydantoinase and with a the mutated hydantoin racemase of claim 24.
- 26. (New) A host cell transformed with a vector encoding the mutated hydantoin racemase of claim 24.
- 27. (New) The mutated hydantoin racemase of claim 24, wherein relative to said first hydantoin racemase said mutagenesis has resulted in a substitution of the amino

acid at position 79 with an amino acid selected from the group consisting of A, R, N, D, C, Q, E, H, I, L, K, M, F, P, S, T, Y and V.

28. (New) An isolated nucleic acid comprising a sequence selected from the group consisting of:
 - a) a nucleic acid sequence coding for the mutated hydantoin racemase of claim 27;
 - b) a nucleic acid sequence which hybridises under stringent conditions with a nucleic acid sequence coding for the mutated hydantoin racemase of claim 27 or with a sequence complementary thereto;
 - c) a nucleic acid sequence according to any one of SEQ ID NO:3, 5, 7 or 9 or a nucleic acid sequence having a homology of greater than 80% therewith;
 - d) a nucleic acid sequence containing 15 successive nucleotides according to the sequence of any one of SEQ ID NO:3, 5, 7 or 9.
29. (New) A vector comprising the isolated nucleic acid of claim 28.
30. (New) A host cell comprising the vector of claim 29.
31. (New) A hydantoin racemase comprising the sequence FX₁DX₂GL (SEQ ID NO:1), wherein X₂ represents P or T and X₁ is at position 79 in said hydantoin racemase and is an amino acid selected from the group A, R, N, D, C, Q, E, H, I, L, K, M, F, P, S, T, Y or V.
32. (New) An isolated nucleic acid comprising a sequence coding for a hydantoin racemase selected from the group consisting of:
 - a) a nucleic acid sequence coding for the mutated hydantoin racemase of claim 31;
 - b) a nucleic acid sequence which hybridises under stringent conditions with a nucleic acid sequence coding for the mutated hydantoin racemase of claim 31 or with a sequence complementary thereto;

33. (New) A vector comprising the isolated nucleic acid of claim 32.

34. (New) A host cell comprising the vector of claim 33.